WHAT IS CLAIMED IS:

1.   A method for defining one or more reusable graphical objects with assignable attributes in a computer graphics scene, the method comprising:

defining at least one graphical object with at least one assignable attribute in its first instance added to the graphics scene; and

adding a second instance of the graphical object with the value for the at least one assignable attribute identified based on the need of the graphics scene,

wherein the first and second instances of the graphical object share a predetermined set of fixed attributes of the graphical object.

2.   The method of claim 1 further comprising providing an initial value to each assignable attribute.

3.   The method of claim 1 wherein the step of adding further comprises detecting the assignable attribute.

4.   A method for reusing a graphical object in a computer graphics library with one or more assignable attributes, the method comprising:

providing initial values for the assignable attributes;

identifying at least one assignable attribute of the graphical object expected to be altered when an instance of the graphical object is used; and

altering the attribute value of the graphical object for the used instance,

wherein the used instance is stored in the library as an entity containing only the assignable attributes while sharing other attributes as defined by the object.

5.   The method of claim 4 wherein the object is defined as a node in the library.

6.   The method of claim 4 wherein the step of identifying further comprises including the assignable attribute and its initial value in a virtual instance node related to the object;

finding a predetermined attribute value for the identified assignable attribute from one or more nodes connected directly or indirectly with the node of the object; and

replacing the initial value of the assignable attribute with the found predetermined attribute value.

7.   A system for reusing a graphical object in a computer graphics library with one or more assignable attributes, the system comprising:

means for providing initial values for the assignable attributes;

means for identifying at least one assignable attribute of the graphical object expected to be altered when an instance of the graphical object is used; and

means for altering the attribute value of the graphical object for the used instance,

wherein the used instance is stored in the library as an entity containing only the assignable attributes while sharing other attributes as defined by the object.

8.   The system of claim 7 wherein the object is defined as a node in the library.

9.   The system of claim 7 wherein the means for identifying further comprises means for:

including the assignable attribute and its initial value in a virtual instance node related to the object;

finding a predetermined attribute value for the identified assignable attribute from one or more nodes connected directly or indirectly with the node of the object; and

replacing the initial value of the assignable attribute with the found predetermined attribute value.